# *Cotton/Soybean Insect Newsletter*

**Volume 16, Issue #18 Edisto Research & Education Center in Blackville, SC 27 August 2021**

## *Pest Patrol Alerts*

The information contained herein each issue is available via text alerts that direct users to online recordings. I will update the short message often for at least as long as the newsletter runs. After a new message is posted, a text message is sent to alert users that I have recorded a new update. Users can subscribe for text message alerts for my updates in two easy steps. Step one: register by texting **pestpat7** to 97063. Step two: reply to the confirmation text you receive by texting the letter "y" to complete your registration. Pest Patrol Alerts are sponsored by Syngenta.

## *Updates on Twitter*

When noteworthy events happen the in the field, I will be sending them out quickly via Twitter. If you want to follow those quick updates, follow me at **@bugdocisin** on Twitter.

## *News from Around the State*

**Jonathan Croft**, county agent in Orangeburg County, stated that he "looked at some 8 week bloom cotton this week in Orangeburg County that was just below threshold for stink bug damage. Heard of a lot of soybeans being sprayed for soybean loopers this week." **Jay Crouch**, county agent in Newberry County, reported that he "scouted quite a few beans the last several days. Insects here are building but not yet at threshold - fungicide sprays are starting, and most growers will include an insecticide. Mainly green cloverworms and a scattered soybean looper here and there. Kudzu bugs seem to be diseasing out." **Tom Smith**, a local crop consultant, reported for cotton over the last two weeks that he's had "no problem finding an assortment in the sucking bug complex from various species of brown and green stink bugs, leaf-footed bugs, and also brown marmorated stink bug (pictured at right). At this point I had observed more brown marmorated last year in cotton versus this year. Maybe they move into cotton a little later in the season as LFB. Also still seeing variable amounts of foliar diseases."

## ***Upcoming Field Day (moved to 16 September)***

Our field day, originally scheduled for 2 September has been postponed a couple of weeks due to growing concerns over COVID. We will offer an in-person field day here at the Edisto REC on 16 September 2021. Registration will be from 8:00 to 9:00 AM. The morning program will cover peanuts and horticulture crops, with cotton, soybeans, and corn covered after lunch. The field day will conclude by 4:00 PM.

**POSTPONED – Peanut, Horticulture, and Agronomic Crops Field Day – New Date 9/16**

August 18, 2021

Due to safety concerns Clemson University has decided to delay the 2021 EREC Field Day by **2 weeks.**

**The new target date is Thursday, September 16th.**

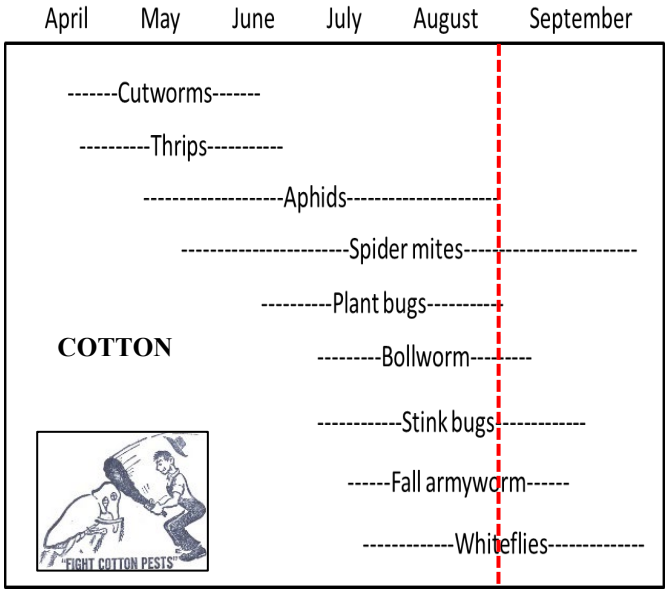
If developments between now and then further affect the situation or result in a cancellation, this information will be shared as soon as it becomes available.

## ***Cotton Situation***

As of 22 August 2021, the USDA NASS South Carolina Statistical Office estimated that about 96% of the crop is setting bolls, compared with 90% last week, 82% at this time last year, and 89% for the 5-year average. About 2% of bolls are opening, compared with 0% last week, 2% at this time last year, and 8% for the 5-year average. The conditions of the crop were 18% excellent, 65% good, 17% fair, 0% poor, and 0% very poor. These are observed/perceived state-wide averages.

## ***Cotton Insects***

Although captures of bollworm moths in my pheromone traps are increasing again, I think most cotton is safe from additional significant injury from bollworm, unless it was planted late. Any cotton planted the first two weeks of June is still at risk. In our planting date study, cotton planted in mid-June is sustaining more damage from bollworm than cotton planted in mid-June or mid-April. Here are some totals from the last 7 weeks of bollworm sampling in big plots of non-Bt, 2-gene Bt cotton, and 3-gene Bt cotton planted in mid-May. We started during the 1st week of bloom and sampled weekly. Boll damage reached 36% in non-Bt cotton and hit 4% in 2-gene Bt cotton. A high of 2% boll damage was observed in 3-gene Bt cotton this week. This was under low/moderate pressure from bollworm. Most cotton is safe from bollworm now but not stink bugs!



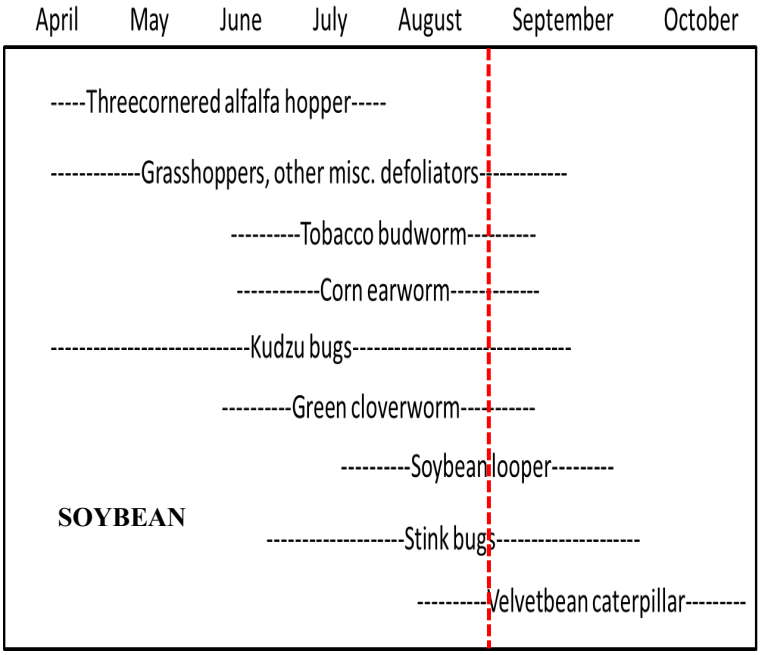

| Week Bloom | Sample Date | Damage in Non-Bt Cotton | | | | Damage in 2-gene Bt Cotton | | | | Damage in 3-gene Bt Cotton | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Bolls | Squares | Blooms | Larvae | Bolls | Squares | Blooms | Larvae | Bolls | Squares | Blooms | Larvae |
| 1st | 7-15 | - | 0/100 | 0/50 | 0/50 | - | 0/100 | 3/50 | 0/50 | - | 0/100 | 0/50 | 0/50 |
| 2nd | 7-21 | 0 | 3/100 | 5/50 | 0/50 | 0 | 1/100 | 1/50 | 0/50 | 0 | 1/100 | 0/50 | 0/50 |
| 3rd | 7-27 | 13/100 | 12/100 | 6/50 | 7/50 | 0/100 | 1/100 | 0/50 | 0/50 | 0/100 | 0/100 | 0/50 | 0/50 |
| 4th | 8-3 | 20/100 | 13/100 | 8/50 | 12/50 | 4/100 | 0/100 | 0/50 | 0/50 | 0/100 | 0/100 | 0/50 | 0/50 |
| 5th | 8-10 | 30/100 | 14/100 | 8/50 | 17/50 | 2/100 | 0/100 | 1/50 | 0/50 | 0/100 | 0/100 | 0/50 | 0/50 |
| 6th | 8-17 | 30/100 | 12/100 | 3/50 | 7/50 | 3/100 | 2/100 | 1/50 | 0/50 | 0/100 | 0/100 | 0/50 | 0/50 |
| 7th | 8-23 | 36/100 | 8/100 | 5/50 | 4/50 | 4/100 | 2/100 | 1/50 | 0/50 | 2/100 | 0/100 | 0/50 | 0/50 |

CLEMSON UNIVERSITY

I saw a dramatic increase in stink bug numbers this week in some untreated cotton we monitor. The complex is leaving "stink bug month" with a bang. Most growers following the dynamic boll-injury threshold should have stink bugs under control. Any reproduction at this point will put pressure on the maturing crop as susceptible fruit bottlenecks up and out on the fruting branches. Immature stink bugs will concentrate on these fruiting sites where the developing bolls are young and easier to feed on than older/harder bolls. So, keep following published recommendations for the boll-injury threshold. Also, leaffooted bugs are in the mix and can add to the boll-injury we observe. I easily saw many of this species this week.

## ***Soybean Situation***

As of 22 August 2021, the USDA NASS South Carolina Statistical Office estimated that about 84% of the crop has bloomed, compared with 75% the previous week, 79% at this time last year, and 83% for the 5-year average. About 43% of the crop is setting pods, compared with 33% the previous week, 46% at this time last year, and 44% for the 5-year average. The conditions of the crop were 20% excellent, 71% good, 9% fair, 0% poor, and 0% very poor. These are observed/perceived state-wide averages.

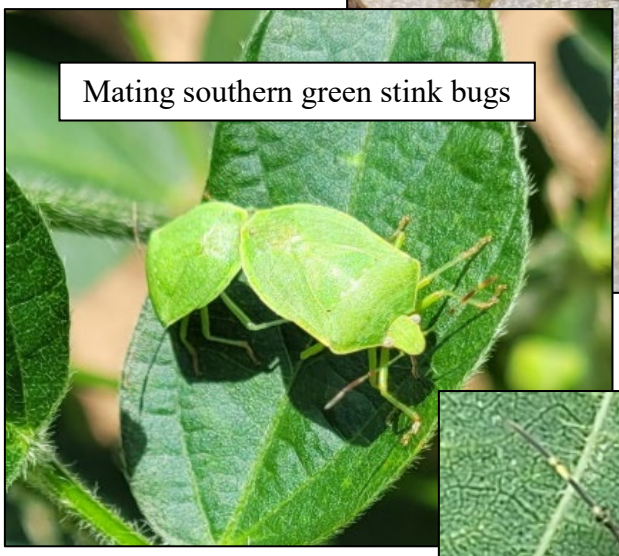



## ***Soybean Insects***

Soybean looper (SBL) is the primary defoliating species of caterpillar right now, but velvetbean caterpillar (VBC) is becoming more numerous in southern locations. Both of these species do not overwinter in SC and migrate from southern latitudes to get here each season, so we always have to anticipate their arrival and react when they get here. Most growers using our 15% defoliation threshold (after bloom) and identifying the offending species should be on top of insect control in their fields. Remember, SBL is resistant to many insecticides, so you have to use a premium, selective insecticide to control the species. Most populations of VBC are easy to control with just about any

insecticide. See our Pest Management Handbook for details on rates, but I would consider one of these for difficult-to-control SBL: Prevathon, Vantacor, Intrepid Edge, Besiege, Elevest, Intrepid, Steward, or Blackhawk. We picked up some podworms in soybean last and this week, and stink bugs were also very numerous, mating, laying eggs, and colonizing untreated soybeans in my program fields. I have never observed this many brown marmorated stink bugs in the Coastal Plain region of SC. Reproduction is high. Here are some photos of podworm and stink bugs from this week.

Podworm



Mating southern green stink bugs

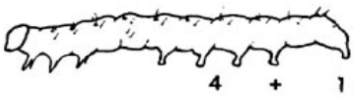
Redbanded stink bug adult

Brown marmorated stink bug nymph

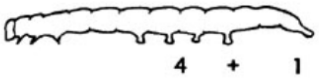
Brown marmorated stink bug adult

As moth activity increases, deposited eggs will yield caterpillar pests on soybeans. It is good skill to be able to identify adult moths flying around in fields. Use this chart to study moth and caterpillar identification.

## FIELD KEY TO COMMON SOYBEAN CATERPILLARS

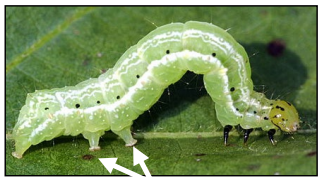


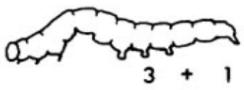

**CORN EARWORM**
4 + 1 pair prolegs
Curls up in hand
Black "warts" on body



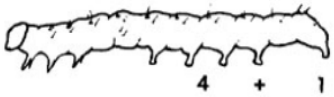

**VELVETBEAN CATERPILLAR**
4 + 1 pair prolegs
Very active when handled


**SOYBEAN LOOPER**
2 + 1 pair prolegs
Fatter at tail end
Looping movement

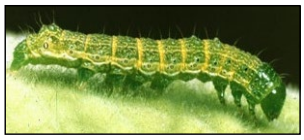





**GREEN CLOVERWORM**
3 + 1 pair prolegs
Not fatter at tail end
Looping movement




**TOBACCO BUDWORM**
4 + 1 pair prolegs
Curls up in hand
Black "warts" on body



(2017) Prepared by Jeremy Greene, Professor of Entomology

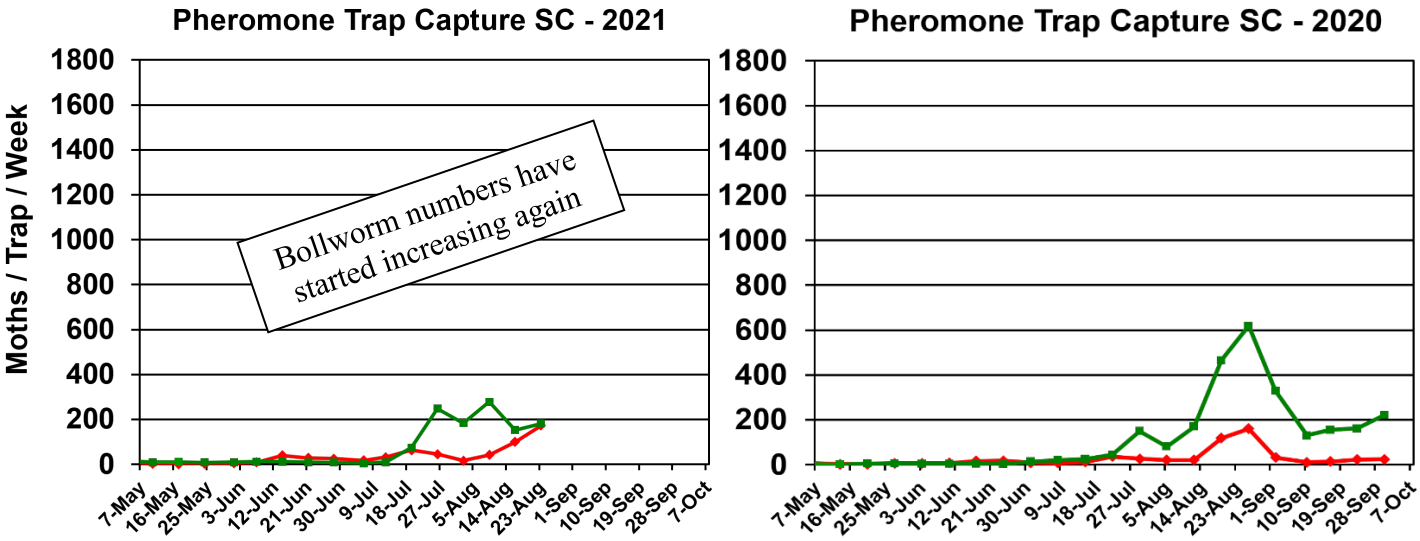


*The Clemson University Cooperative Extension Service offers its programs to people of all ages, regardless of race, color, gender, religion, national origin, disability, political beliefs, sexual orientation, marital or family status and is an equal opportunity employer. Clemson University Cooperating with U.S. Department of Agriculture, South Carolina Counties, Extension Service, Clemson, South Carolina.*

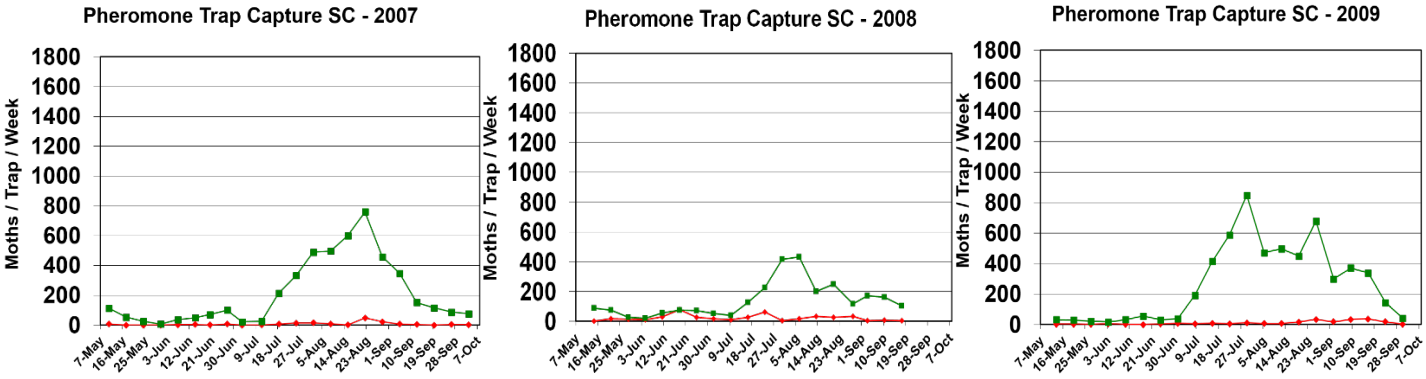
*Public Service Activities*

## ***Bollworm & Tobacco Budworm***

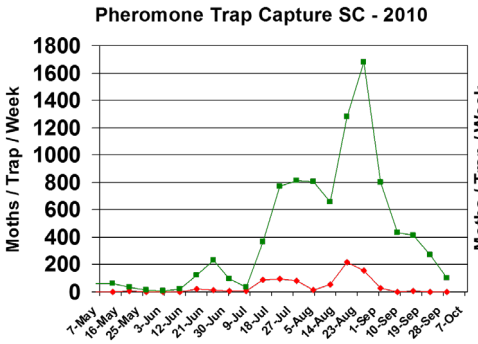
Captures of bollworm (BW) and tobacco budworm (TBW) moths in pheromone traps at EREC this season are shown below, as are the captures from 2007-2020 for reference. Tobacco budworm continues to be important for our soybean acres and for any acres of non-Bt cotton. I provide these data as a measure of moth presence and activity in our local area near my research plots. The numbers are not necessarily representative of the species throughout the state but are useful for general trends.

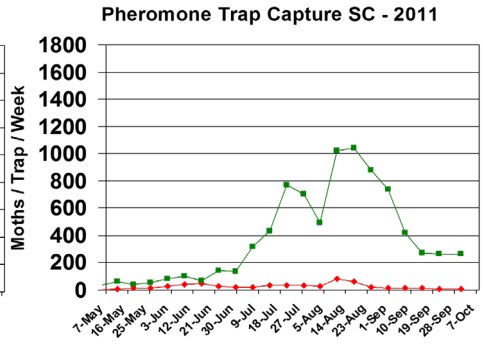



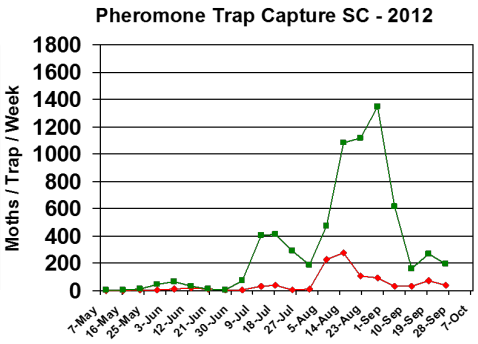

Trap data from 2007-2019 are shown below for reference to other years of trapping data from EREC:

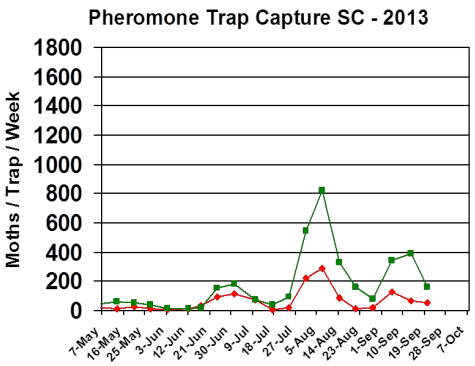


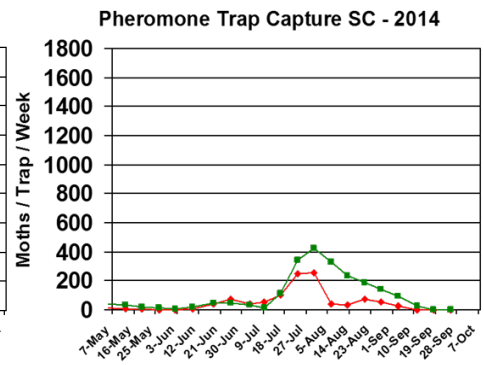
CLEMSON UNIVERSITY

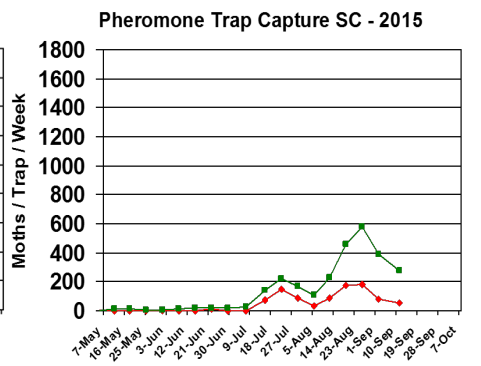


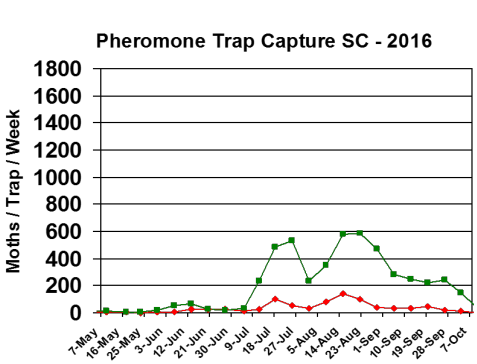



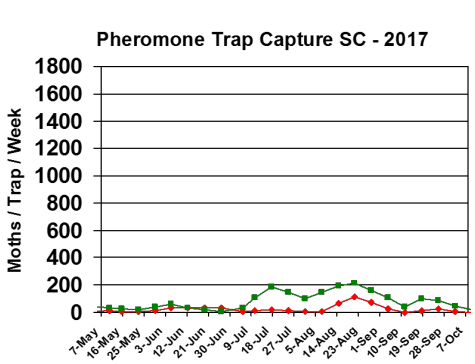



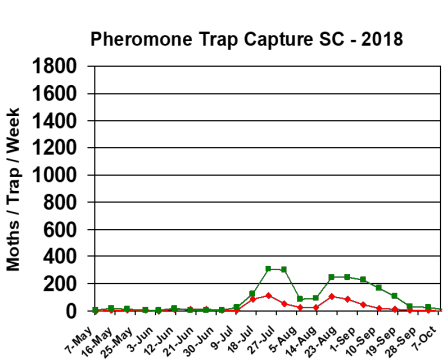



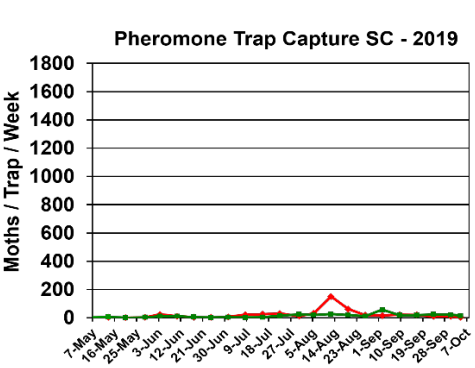



## ***Pest Management Handbook – 2021***

Insect control recommendations are available online in the 2021 South Carolina Pest Management Handbook at:
https://www.clemson.edu/extension/agronomy/pest%20management%20handbook.html

## ***South Carolina Crops Blog***

The SC Crops Blog contains content about production of major row crops at the following link, if you want more information: https://blogs.clemson.edu/sccrops/
Archived issues of the Cotton/Soybean Insect Newsletter can be viewed at a convenient link on the SCCrops page. Contact **Dr. Michael Plumblee**, if you have any questions about the blog.

## ***Free Mobile Apps: "Calibrate My Sprayer" and "Mix My Sprayer"***

Download our free mobile apps called "Calibrate My Sprayer" and "Mix My Sprayer" that help check for proper calibration of spraying equipment and help you with mixing user-defined pesticides, respectively, in custom units (available in both iOS and Android formats):
http://www.clemson.edu/extension/mobile-apps/

## ***Need More Information?***

For more Clemson University Extension information: http://www.clemson.edu/extension/

For historical cotton/soybean insect newsletters:
https://www.clemson.edu/extension/agronomy/cotton1/newsletters.html

Sincerely,

Jeremy K. Greene

Jeremy K. Greene, Ph.D.
Professor of Entomology

Visit our website at:
http://www.clemson.edu